

Three Strategies for Investing One-Time Federal Relief Aid to Make a Lasting Difference

Sustainable Financing of Education Innovations

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The COVID-19 pandemic offers an opportunity to reconsider the approach and delivery of public education. With a large infusion of one-time federal relief aid¹ and a depth of need among students most impacted by the COVID-19 pandemic that the system is still trying to understand,² state and local education leaders will need to plan for both (1) short-term investments to accelerate learning and address student well-being and (2) long-term structural changes to the education system.

This opportunity for transformational change in education requires early planning and ongoing monitoring of investments to gauge whether they are having their intended impact. To ensure that the quality of the U.S. education system continues to improve even after the one-time federal aid is gone, education leaders will want to consider how to use one-time funding strategically in a way that fuels ongoing improvement in student outcomes for years to come. This brief provides an overview of three strategies for planning for sustainability,³ or long-term improvements in local and state education systems, when investing one-time federal funds.

First, to help ensure investments target both immediate and long-term system needs, state and local leaders may consider **segmenting or organizing investments** into (1) one-time investments in infrastructure, (2) short-term intensive investments to assess and address the immediate needs students have as a result of the pandemic, and (3) investments in system innovation that lead to sustainable improvements in practice. Considering how best to organize investments into these categories can help

education leaders plan carefully and avoid common investment pitfalls.

Second, state and local leaders can **prioritize investments with long-term returns on student outcomes and future cost savings**, including infrastructure upgrades, interventions for students with greater needs, and staff capacity building. Investments that lead to long-term cost savings free up resources to help education leaders sustain investments in practices that make a positive difference for students.

Third, state and local leaders may want to consider **modeling investments over the next few years**, including an initial period of “ramping up,” followed by the period of heaviest investment, and then a “ramping down” of investments as local education agencies (LEAs) near the 2025 deadline for the use of federal funding.⁴ This strategy can help education leaders plan for and communicate about which investments they may want to continue — and which investments they expect to end — when federal aid funds are no longer available.

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Note that although the examples of investments described in this brief often pertain to the local level (e.g., providing various services for students), state education leaders can leverage these same strategies when considering how best to use federal funds to improve state-level infrastructure and programs to support schools and districts.

Strategy 1: Segmenting Fund Use

As state and local leaders consider how to invest federal aid to improve outcomes for students, investments can be segmented into three categories:

1. one-time investments in infrastructure;
2. short-term intensive investments to assess and address students' immediate needs; and
3. investments in system innovation that lead to sustainable improvements in practice.

Organizing these three important investment types in this way can help ensure a balance among them based on local needs. Also, at a time when local education leaders may be overwhelmed with decisions about the return to full-time in-person instruction and how to assess and meet student and staff needs, this strategy can help local leaders avoid overinvestment in approaches that promise quick fixes or that merely increase existing investments without strategically considering their long-term impact on student learning and well-being.

Figure 1 provides examples of the types of investments that fall into each of these three categories. Although the exact mix of investments made by states and LEAs will vary by context, considering how investments can address truly one-time, short-term, and long-term needs can be a useful strategy for organizing investments and for communicating how one-time funds will be used to drive system improvements.⁵ Several of the investments listed in Figure 1 are described in more detail in the following section on investments with a high rate of return and, in some cases, investments that lead to reductions in future costs.

Figure 1: Segmenting Fund Use Into Three Types of Investments

One Time	Short Term	System Innovation
Truly one-time investments in infrastructure	Short-term intensive investments to address students' immediate needs	Investments in system innovation for sustainable improvement in practice
<ul style="list-style-type: none">• Hardware and software (3-year to 4-year lifecycle)• Wi-Fi/broadband• Building upgrades and maintenance (10-year to 15-year lifecycle)• Curriculum adoption	<ul style="list-style-type: none">• Extended learning and/or summer learning for targeted student populations• High-dosage intensive tutoring• Additional staffing to assess and address social-emotional well-being for students, educators, and families	<ul style="list-style-type: none">• Core staff capacity building to increase instructional quality and advance equity• Improved coordination of services for students with multiple types of needs (e.g., English learners who also receive special education)• Universal screening and intervention data systems• Talent pipelines (teachers and classified staff)

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Strategy 2: Prioritizing Investments With Long-Term Returns

The federal government is providing nearly \$200 billion in federal aid from three separate aid packages for K–12 education alone.⁶ Even though these are one-time funds, state and local education leaders can invest in research-based strategies with long-term returns on investment. These returns include both improvements in student outcomes and potential cost savings in the future, which can help free up resources to continue investments that are effective in improving outcomes for students.

Invest in Infrastructure Needs

The strategies outlined in this section correspond to the types of one-time investments shown in Figure 1. Federal aid may be used to make investments in infrastructure throughout the next several years.

Address Outstanding Facilities Issues

During the 2020/21 school year, existing facility-related needs were exacerbated by extreme weather events unrelated to the COVID-19 pandemic. Schools in Oregon burned in the worst fire season the region had ever experienced. Schools in Florida flooded following Tropical Storm Eta. And schools in Texas froze over during an extremely cold week in February. A report published by the U.S. Government Accountability Office (GAO) in 2020 indicated that 54 percent of LEAs needed to update or completely replace multiple building systems (e.g., ventilation/air conditioning systems, lighting systems) in their schools.⁷ For districts already in financial distress — often those that serve higher proportions of students from low-income households and students of color — it may be especially difficult to implement these necessary repairs.⁸

This is concerning not only with regard to those districts' balance sheets (e.g., leaky roofs or faulty water pipes incur greater and greater costs the longer they go unaddressed) and, potentially, their ability to keep students safe from virus transmission, but also with regard to academic outcomes. Studies have found an association between classroom quality and performance on standardized tests. For example, students test poorly if a test is administered on an especially hot day⁹ or after particularly hot years.¹⁰ Conversely, a 2011 study found that in an urban school district in Connecticut, six years after new school buildings were built and occupied, reading scores for elementary and middle school students improved. What's more, school construction also raised public school enrollment in these neighborhoods,¹¹ suggesting that such investments may help combat the negative financial impacts of declining enrollment seen in many schools.

The costs of buildings in disrepair compound year over year — both economically and academically. Using one-time funds to invest in repairs as quickly as possible can mitigate these costs while also allowing schools and districts to reap the benefits of upgraded buildings. Notably, federal aid for capital expenditures must focus on school facility repairs and improvements that help reduce the risk of transmitting COVID-19 and provide for the health needs of students. Examples of the types of expenditures that federal aid can be used for include replacing windows and fixing roofs for air quality; replacing flooring for cleaning purposes; and constructing additional classrooms or purchasing or leasing portable classrooms to support social distancing. Note that in some cases, capital improvement projects can take considerable time, and any capital expenditure over \$5,000 requires preapproval by the state. Local education leaders should consider the time necessary

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to move a capital project through the initial planning process in order to ensure that a project's timeline is compatible with the availability of federal aid to support the project.

Improve Broadband Network and Invest in Connected Devices

Student access to broadband Internet and connected devices — another critical infrastructure investment — can also lead to long-term returns on student achievement.¹² Although considerable progress has been made in diminishing the digital divide (i.e., some students' lack of access to digital learning resources) since the pandemic began in March 2020, gaps remain. As of May 2021, 18 percent of households with children in public or private school did not always have Internet available for educational services.¹³ According to the Federal Communications Commission, nearly 17 million children lack access to the Internet at home.¹⁴ These gaps in access disproportionately affect students from low-income households and African American, Hispanic/Latinx, and Native American students.¹⁵ A study of the reading scores of the National Center for Educational Progress's NAEP (National Assessment of Educational Progress) showed that students with access to high-speed Internet at home scored higher, on average, than students without access to the Internet at home.¹⁶ Accordingly, when making investments in digital infrastructure, state and local leaders should consider expanding student access to digital devices and broadband both at school and at home, particularly because research indicates that students' ability to use digital learning resources at school is affected by their use of digital learning resources at home.¹⁷

In addition to its \$125 billion in federal aid for K–12 education, the American Rescue Plan (ARP) aims to

promote digital equity by offering billions of dollars to improve the nation's broadband infrastructure. The ARP's Emergency Connectivity Fund (ECF) provides schools and libraries with nearly \$7.2 billion for investments in laptops, tablets, Wi-Fi hotspots, modems, and routers, to which students often do not have access.¹⁸ Most options for providing students with Internet connectivity, such as purchasing in-home Internet subscriptions and hotspots, will require ongoing investment, but some districts are instead looking to build the necessary infrastructure to become Internet service providers themselves.¹⁹ Even as students return to in-person instruction, reliable Wi-Fi and connected devices will continue to be invaluable for learning outside the classroom, and ARP funds have the potential to greatly improve connectivity for millions of students. Investments in digital infrastructure and devices can have long-term impacts on student academic achievement without locking states and LEAs into long-term fiscal obligations once federal aid is gone.

Invest in Intensive Academic Supports

Targeted investments in interventions for students with the greatest needs have the potential to accelerate learning and improve students' long-term academic outcomes. The strategies outlined in this section include a mix of both short-term intensive investments to address students' immediate needs resulting from the pandemic, such as high-impact tutoring (Figure 1), and investments in system innovation for sustainable improvement in practice, such as developing early intervention screening and data systems (Figure 1).

Students are returning to classrooms with myriad needs as a result of the COVID-19 pandemic, including the need for increased academic supports due to inequitable access to instructional opportunities.²⁰ However, the extent of these needs is still unknown, and it is important

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to note that recent assessments of student learning and social-emotional needs are insufficient to understand the depth of current student needs. Many assessments were delayed because of the pandemic or are still in progress, large numbers of the most vulnerable students were not assessed over the last 15 months, and assessments were generally narrowly focused and therefore do not present the full picture of student needs.²¹ Accordingly, state and district leaders should consider investing federal aid in comprehensive assessments of student needs and short-term intensive interventions to address students' immediate social, emotional, and academic needs. Education leaders can use these investments to learn about the most effective intervention strategies and systems to continue in the future.

One strategy that has gained considerable attention for helping accelerate learning for students with reduced access to instructional opportunities during the pandemic is high-impact tutoring.²² Research has shown that effective tutoring programs for students from low-income households can improve students' academic achievement in math²³ and in English language arts.²⁴ Among other research-based suggestions, The Education Trust suggests that high-impact tutoring should be embedded during the school day, should be offered consistently for three or more days per week, should occur in groups of four or fewer students, and should be taught consistently by the same tutor.²⁵

Furthermore, such interventions — including early intervention services for children aged 0 to 3, as well as other supports for young learners — have the potential to reduce identification for special education services.²⁶ Although early intervention is critical before students are referred for special education, African American and Hispanic/Latinx children are identified for support later than their White peers are. To make matters worse,

during the pandemic, referral rates for early intervention dropped and wait times for services increased.²⁷ Consequently, fewer children received early intervention services over the 2020/21 school year, which may lead to poorer academic and social-emotional outcomes in the future. State and local education leaders should consider how to leverage federal aid to ensure access to appropriate interventions for all young learners who need them, including early intervention services and interventions in preschool and elementary school. These investments provide enormous benefits for students in the near and long term and can help reduce more intensive, costly interventions in the future.

Twenty percent of the ARP funds allocated to LEAs and 5 percent of the ARP funds allocated to states are reserved for addressing learning loss through evidence-based interventions. State and local education leaders may consider using a portion of these funds — amounting to more than \$30 billion nationally — to identify children who otherwise would have been identified as eligible for early intervention services in a typical year. Investing in early intervention screening and data systems is a particularly cost-effective strategy for identifying students in need of additional support. Doing so can facilitate identifying struggling students in the near term and closing equity gaps in the long term. Avoiding costly interventions in the future also helps free up resources so that they can be used to support students in other ways.

Invest in Capacity Building

The impacts of ARP funds can be magnified through effective professional learning and growth opportunities. Investments in professional learning are categorized as system innovations (Figure 1) because they have the potential to lead to sustainable improvements in

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practice that fundamentally alter the quality of instruction for students and advance equity. The most effective professional learning opportunities for teachers are collaborative, actively engaging, discipline-specific, and of a sustained duration.²⁸ Turning to expert teachers as mentors and coaches can be an effective strategy in sustaining professional learning and building capacity among educators.²⁹ LEAs may consider offering stipends to highly effective teachers to lead professional learning opportunities and thus extend their impact in a school.³⁰ For example, these teachers can provide training opportunities to tutors, frequently uncredentialed staff who can be more effective when they are provided with pre-service training and ongoing coaching.³¹ Highly effective teachers can also lead or co-lead professional learning opportunities for other teachers and paraprofessionals within the school.

Several specific areas of focus for professional learning have gained attention since the COVID-19 pandemic began.³² First, professional learning should equip teachers to utilize new technology in their instruction. Many districts have used funds provided by the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) and the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) to invest in new educational technologies, and some forms of remote instruction are likely to continue even after most schools return to full-time in-person instruction.³³ In addition, teachers and other school staff can benefit from race and equity training to increase their ability to navigate conversations about race and racial justice, to build awareness of teacher and student social identity and power dynamics, and to develop and strengthen approaches to culturally responsive teaching. Cultural competence of school staff and their ability to authentically engage with students and families are key to student success. Finally, teachers

could benefit from professional learning to support their and their students' social-emotional needs after the return to in-person instruction. Many members of the school community — from students to staff — have experienced various forms of stress, emotional exhaustion, and trauma due to the pandemic. Professional learning can help expand educators' toolboxes for supporting student well-being and employing strategies for maintaining their own health and well-being.

Given that teachers are the most important school-related factor that influences student achievement,³⁴ investments in capacity building can have powerful, long-term positive impacts on student learning. Yet capacity building efforts need not be confined to teachers only. Front office staff, paraprofessionals, and other classified staff all contribute to supporting student learning and well-being and therefore should also be considered for professional learning opportunities. These professional learning and growth opportunities, if viewed as valuable resources by teachers and other staff, also have the potential to impact broader teacher and staff retention efforts by providing educators with the support they need.³⁵

Invest in Partnerships

Investing in partnerships is another important strategy, at all levels of the system, that can both help develop sustained system improvements and meet short-term needs (Figure 1). Investing in partnerships with other sectors — such as nonprofits, institutes of higher education, community-based organizations, and the philanthropy and business communities — can lead to long-term returns for students. Community partners can also help address short-term intensive needs of students and families.

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During the pandemic, some states and school districts were able to forge relationships with technology companies and nonprofits to ensure that students had access to digital devices and Wi-Fi. State and school districts also expanded partnerships with public health agencies and health and human services departments to ensure that families continued to have access to a range of supports, including mental health and housing. Many of these agencies are also receiving one-time federal aid. Blending and braiding these sources of one-time funding in a coordinated system of support for students and families has the potential to lead to long-term improvements in outcomes and to create greater efficiencies in resource use. Forming partnerships with community-based organizations and other trusted community service providers is another potential strategy for accelerating student learning and well-being by helping to identify and provide the learning and social-emotional well-being supports that students need. For example, LEAs can provide extended-day learning programs by developing partnerships with programs that operate outside school hours, and they can provide tutors by developing partnerships with local colleges and universities.

Investments in staff and infrastructure to develop these critical partnerships can help expand and extend the reach of the investments and their impact on student outcomes. Some states are considering investments in community school models that leverage partnerships as a central strategy for providing whole-child supports. Whole-child supports are more important than ever, as many students and families have increased needs due to the pandemic and had less access to whole-child supports while schools were employing distance learning. These partnerships rely both on strong relationships with students, families, and communities and on relationships with external partners from philanthropy,

nonprofits, and other government agencies. As part of this approach, education leaders may also want to consider investments in their capacity to communicate with families and communities. For example, they could provide additional translation services, translate more materials, make events more accessible for families, and provide more home visits and other types of family and community outreach.

Strategy 3: Modeling the Use of Funds — Including Ramping Up and Ramping Down

Another important strategy for state and district education leaders is to plan for the use of federal aid funds in phases, including planning for when the federal aid is gone. Modeling or projecting the use of funds over the next few years that the federal aid is available can help education leaders and stakeholders review investments in phases and then determine which investments to continue.

This strategy involves ramping up investments, likely in the 2021/22 school year, and then ramping down as the September 2025 deadline for the use of federal aid draws closer. In order to do so, states and districts need to plan for investments in phases based on the needs of students and the system as a whole. For example, some education leaders have predicted that costs may be higher for LEAs in fall 2021 because of the need to address students' emotional well-being, the need for comprehensive assessments of student needs, and additional facility costs such as ventilation upgrades and increased cleaning.

As district leaders engage with students, teachers, staff, and community stakeholders to determine priorities for the use of federal aid, they need to consider the time frame of the investments. Some investments will be truly one-time expenditures. Others, based on how successful

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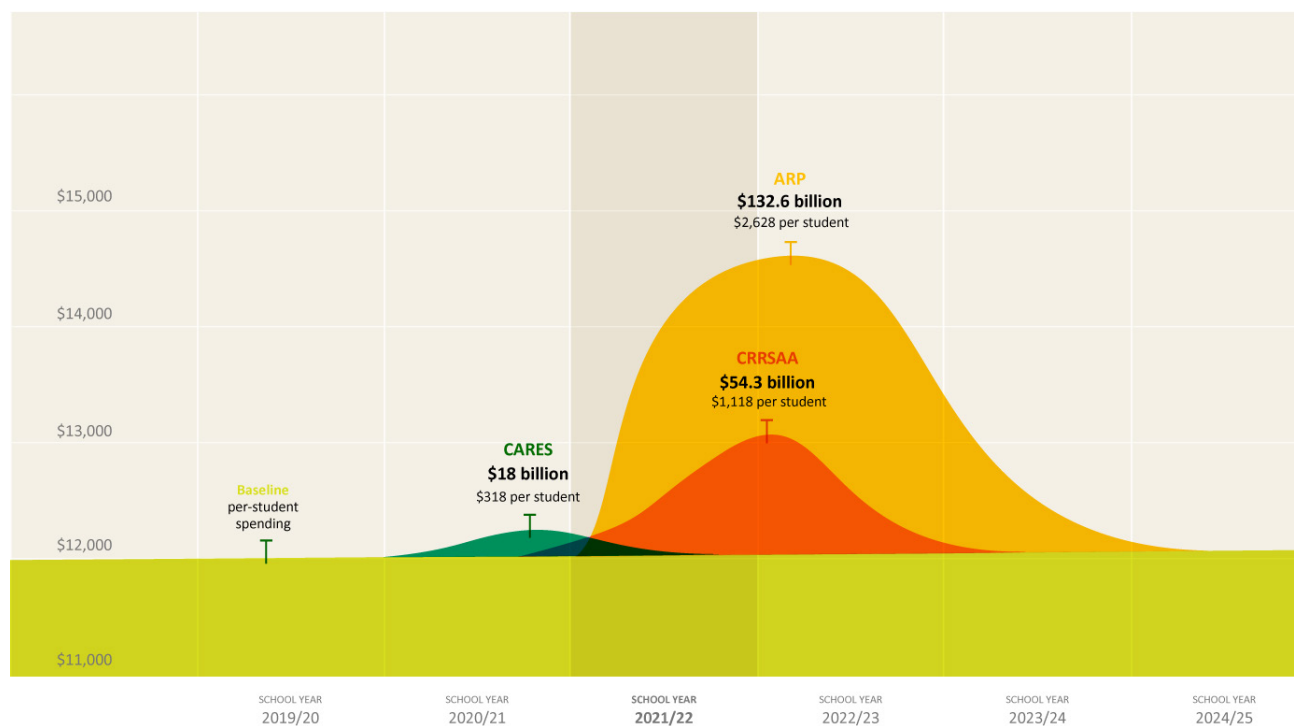
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they prove to be in improving outcomes for students, may have to be discontinued in either the short term or the long term. These projections should be transparent enough for public stakeholders to understand. Modeling investments over time, as well as outlining a strategy and timeline for monitoring whether new investments are having their intended impact, creates a roadmap for spending over the next few years. Projecting spending may also help state and district leaders avoid rushing into investments, spending large portions of funding on

programs that are untested in their systems, or waiting and rushing to spend federal aid at the end.

Figure 2 models how an LEA might ramp up and then ramp down per-pupil expenditures based on when the various sources of federal aid are available. Referencing the amounts and time frames associated with each funding source can help state and district leaders project the quantity of funds available to invest at any given time over the next several years. This information can then inform how best to ramp up and ramp down investments.

Figure 2: Per-Pupil Expenditures Based on the Availability of Federal Relief Aid



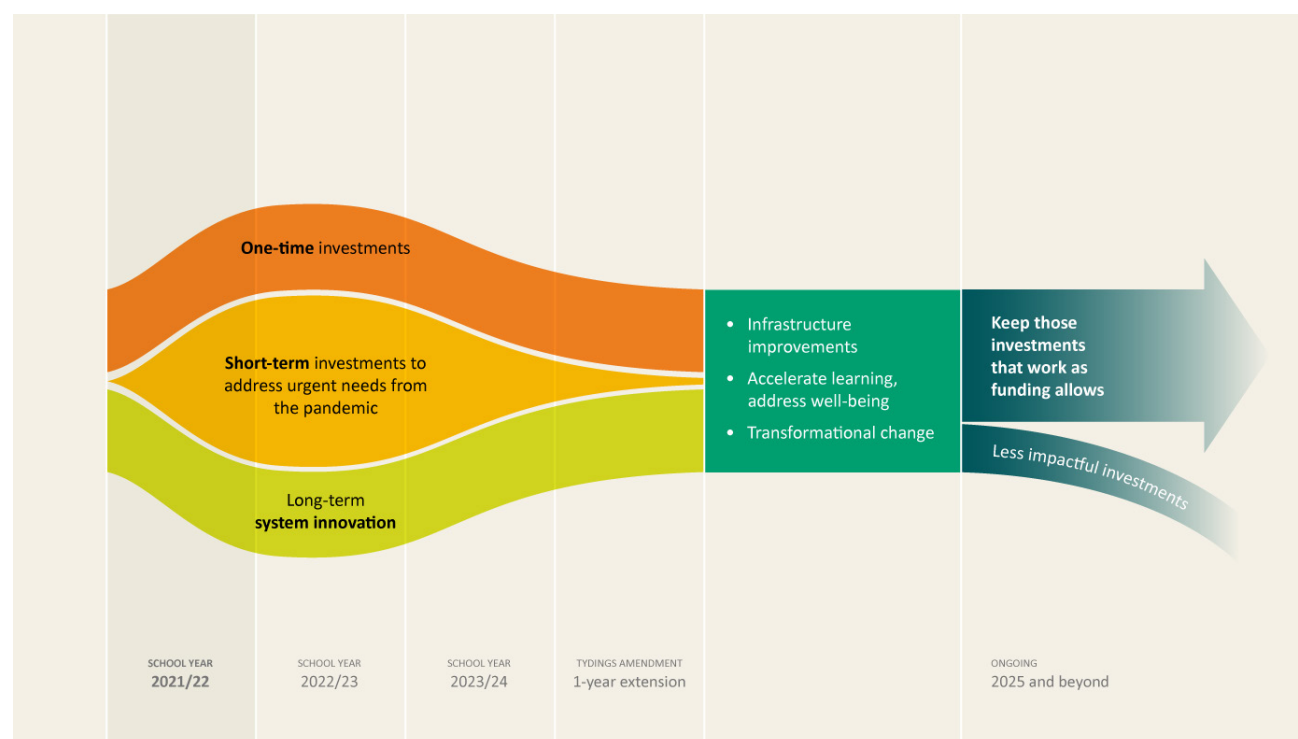
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Figure 3 visualizes how LEAs might model or project the use of different types of funding (Figure 1) from 2021 to 2025. One-time expenditures are likely to be made through the 2021/22 school year as immediate needs are identified. Short-term investments will likely ramp up in fall 2021 and then ramp down over a period of one or two school years. However, not all one-time and short-term investments need to be made during the 2021/22 school year. They can be scheduled

for various times later during the funding period. For example, some LEAs may choose to wait on some investments until after they have had an opportunity to assess student needs. Long-term investments may continue beyond the availability of federal aid if (1) they lead to improved student outcomes and (2) additional funding becomes available when federal aid is no longer available or staff attrition or budget cuts support the new investments.

Figure 3: Flow of Investment Priorities Using Federal Relief Aid



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Spending visualizations are useful not only for internal planning purposes, but also for communicating with stakeholders about state and district priorities for the use of federal aid, when they can expect the federal aid to end, and how the availability of the aid may impact new investments.

Conclusion

By carefully planning for sustained improvement in student outcomes, state and district leaders have the opportunity to invest one-time federal relief aid in ways that not only can meet immediate needs, but also can lead to transformational changes in education systems across the United States and have a lasting impact on students' opportunities for long-term success. As part of this effort, local education leaders can partner with stakeholders to communicate how investments of federal aid will lead to long-term systems improvement. In fact, communicating

and sharing strategies about local successes in leveraging federal aid to improve student outcomes will be critical to converting one-time federal aid into long-term investments in U.S. education systems.

As leaders plan how to use federal aid, it is important that they engage with stakeholders not only to discuss the value of each type of investment in improving student outcomes and yielding potential cost savings in the future, but also to create a common understanding of how long each investment could be sustained. Moreover, in addition to considering the needs of partnering stakeholders, state and local education leaders should ensure that students, families, and communities who are currently not well served by the system are engaged in the full range of decisions about resources, including how their needs can inform the most impactful solutions.

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Endnotes

- 1 The American Rescue Plan (ARP), passed in March 2021, provided approximately \$125 billion to K–12 education; the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), passed in December 2020, provided \$57 billion; and the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), passed in March 2020, provided \$13.5 billion.
- 2 Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E., & Lewis, K. (2020, December 3). How is COVID-19 affecting student learning? Initial findings from fall 2020. *Brown Center Chalkboard* [Blog]. The Brookings Institution. <https://www.brookings.edu/blog/brown-center-chalkboard/2020/12/03/how-is-covid-19-affecting-student-learning/>; Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020, December 8). COVID-19 and learning loss — disparities grow and students need help. *Public & Social Sector Insights*. McKinsey & Company. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-learning-loss-disparities-grow-and-students-need-help>; Renaissance Learning. (2021, Winter). *How kids are performing: Tracking the midyear impact of COVID-19 on reading and mathematics achievement*; Park, Y., Nakamura, J., Rush, J., & Fuxman, S. (2020, June 2). Supporting students experiencing trauma during the COVID-19 pandemic. *REL Appalachia Blog*. Institute of Educational Sciences, U.S. Department of Education. https://ies.ed.gov/ncee/edlabs/regions/appalachia/blogs/blog30_supporting-students-experiencing-trauma-during-COVID-19-pandemic.asp
- 3 “Planning for sustainability” in this policy brief refers to long-term improvement in state and local education systems, not necessarily to ensuring the programs or strategies in which a system invests have sustainable, or long-term, funding.
- 4 State and local education agencies have until September 2022 to use their CARES Act funding, until September 2023 to use their CRRSAA funding, and until September 2024 to use their ARP funding. Notably, the Tydings Amendment (as incorporated in the General Education Provisions Act) allows state and local education agencies to carry over for one additional year any federal education funds that were not obligated in the period for which they were appropriated.
- 5 Organizations such as ERS (Education Resource Strategies) also provide suggestions on investments for recovery and redesign.
- 6 American Rescue Plan Act of 2021, H.R. 1319 § 2001 (2021, March 11). <https://www.congress.gov/bill/117th-congress/house-bill/1319/text#toc-HC9CE46A721204EB081A88ACD8FB287D5>; Office of Elementary & Secondary Education. (2021). *Elementary and secondary school emergency relief fund*. U.S. Office of Education. <https://oese.ed.gov/offices/education-stabilization-fund/elementary-secondary-school-emergency-relief-fund/>
- 7 U.S. Government Accountability Office. (2020, June). *School districts frequently identified multiple building systems needing updates or replacement* [GAO-20-494, report to Congressional addresses]. <https://files.eric.ed.gov/fulltext/ED609665.pdf>
- 8 Knight, D. S. (2017, Fall). Are high-poverty school districts disproportionately impacted by state funding cuts? School finance equity following the Great Recession. *Journal of Education Finance*, 43(2), 169–194. <https://www.jstor.org/stable/45093658?seq=1>; EdBuild. (2019, February). *Nonwhite school districts get \$23 billion less than white districts despite serving the same number of students*. <https://edbuild.org/content/23-billion>
- 9 Park, J. (2017, February 26). *Temperature, test scores, and human capital production*. https://scholar.harvard.edu/files/jisung-park/files/temperature_test_scores_and_human_capital_production_-_j_park_-_2-26-17.pdf
- 10 Goodman, J., Hurwitz, M., Park, J., & Smith, J. (2019, November). *Heat and learning* [NBER working paper no. 24639]. National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w24639/w24639.pdf
- 11 Neilson, C., & Zimmerman, S. (2011, November). *The effect of school construction on test scores, school enrollment, and home prices* [Discussion paper no. 6106]. Institute for the Study of Labor. <http://ftp.iza.org/dp6106.pdf>
- 12 National Center for Education Statistics. (2018, April). Executive summary. *Student access to digital learning resources outside of the classroom*. Institute of Educational Sciences, U.S. Department of Education. <https://nces.ed.gov/pubs2017/2017098/index.asp>

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- 13 Tomer, A., & George, C. (2021, June 1). *The American Rescue Plan is the broadband down payment the country needs*. The Brookings Institution. <https://www.brookings.edu/research/the-american-rescue-plan-is-the-broadband-down-payment-the-country-needs/>
- 14 Federal Communications Commission. (n.d.). *Homework gap and connectivity divide*. <https://www.fcc.gov/about-fcc/fcc-initiatives/homework-gap-and-connectivity-divide>
- 15 Ali, T., Chandra, S., Cherukumilli, S., Fazlullah, A., Hill, H., McAlpine, N., McBride, L., Vaduganathan, N., Weiss, D., & Wu, M. (2021). *Looking back, looking forward: What it will take to permanently close the K–12 digital divide*. Common Sense Media. https://www.commonsensemedia.org/sites/default/files/uploads/kids_action/final_-_what_it_will_take_to_permanently_close_the_k-12_digital_divide_vjan26_1.pdf; Auxier, B., & Anderson, M. (2020, March 16). *As schools close due to the coronavirus, some U.S. students face a digital “homework gap.”* Pew Research Center. <https://www.pewresearch.org/fact-tank/2020/03/16/as-schools-close-due-to-the-coronavirus-some-u-s-students-face-a-digital-homework-gap/>
- 16 National Center for Education Statistics. (2018, April). Indicator 15: Reading scores by computer use and internet access at home. *Student access to digital learning resources outside of the classroom*. Institute of Educational Sciences, U.S. Department of Education. https://nces.ed.gov/pubs2017/2017098/ind_15.asp
- 17 Henderson, R. (2011). Classroom pedagogies, digital literacies, and the home-school digital divide. *International Journal of Pedagogies and Learning*, 6(2), 152–161. <http://www.tandfonline.com/doi/abs/10.5172/ijpl.2011.152>
- 18 ECF funds can be spent through September 2030.
- 19 Tadayon, A., & Johnson, S. (2021, January 24). *California schools build local wireless networks to bridge digital divide*. EdSource. <https://edsources.org/2021/california-schools-build-community-wireless-networks-to-bridge-digital-divide/645919>
- 20 Kaufman, J. H., & Diliberti, M. K. (2021). *Divergent and inequitable teaching and learning pathways during (and perhaps beyond) the pandemic: Key findings from the American Educator Panels Spring 2021 COVID-19 surveys*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA168-6.html
- 21 Dadey, N., Lorie, W., & Brandt, C. (2021, March 31). *Including missing data in the estimate of the impact of the pandemic on student learning*. National Center for the Improvement of Educational Assessment. <https://www.nciea.org/blog/school-disruption/including-missing-data-estimate-impact-pandemic-student-learning>
- 22 The Education Trust. (2021, May 27). *State guidance for high-impact tutoring*. <https://edtrust.org/resource/state-guidance-for-high-impact-tutoring/>; Dietrichson, J., Bøg, M., Filges, T., & Klint Jørgensen, A. (2017). Academic Interventions for elementary and middle school students with low socioeconomic status: A systematic review and meta-analysis. *Review of Educational Research*, 87(2), 243–282. <https://journals.sagepub.com/doi/10.3102/0034654316687036>
- 23 Ander, R., Guryan, J., & Ludwig, J. (2016, March). *Improving academic outcomes for disadvantaged students: Scaling up individualized tutorials* [Policy proposal 2016-02]. The Hamilton Project, The Brookings Institution. <https://www.brookings.edu/wp-content/uploads/2016/07/Full-Paper-1.pdf>; Mahnken, K. (2021, March 8). *Study: Chicago tutoring program delivered huge math gains; personalization may be the key*. The 74. <https://www.the74million.org/study-chicago-tutoring-program-delivered-huge-math-gains-personalization-may-be-the-key/>
- 24 Kraft, M. A. (2013, April). *How to make additional time matter: Integrating individualized tutorials into an extended day*. https://scholar.harvard.edu/files/mkraft/files/kraft_-_how_to_make_additional_time_matter.pdf
- 25 The Education Trust. (2021, May 27). *State guidance for high-impact tutoring*. <https://edtrust.org/resource/state-guidance-for-high-impact-tutoring/>
- 26 Muschkin, C. G., Ladd, H., & Dodge, K. A. (2015, February). *Impact of North Carolina’s early childhood initiatives on special education placements in third grade* [CALDER working paper no. 121]. National Center for the Analysis of Longitudinal Data in Education Research. <https://caldercenter.org/sites/default/files/WP%20121.pdf>

Three Strategies for Investing One-Time Federal Relief Aid to Make a Lasting Difference

Sustainable Financing of Education Innovations

- 27 The Education Trust. (2021, May 27). *State guidance for high-impact tutoring*. <https://edtrust.org/resource/state-guidance-for-high-impact-tutoring/>
- 28 Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017, June). *Effective teacher professional development*. Learning Policy Institute. <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>
- 29 Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017, June). *Effective teacher professional development*. Learning Policy Institute. <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>
- 30 For more information on this strategy, please see [WestEd's policy brief on use of one-time funds for staffing](#).
- 31 The Education Trust. (2021, May 27). *State guidance for high-impact tutoring*. <https://edtrust.org/resource/state-guidance-for-high-impact-tutoring/>
- 32 Soika, B. (2021, May 7). *Professional development for teachers during the pandemic* [Blog]. USC Rossier School of Education. <https://rossier.usc.edu/professional-development-for-teachers-during-the-pandemic/>
- 33 Herold, B. (2021, April 20). Schools are flush with stimulus money. Will they waste it on unproven technology? *Education Week*. <https://www.edweek.org/technology/schools-are-flush-with-stimulus-money-will-they-waste-it-on-unproven-technology/2021/04>
- 34 Darling-Hammond, L. (1999, November 30). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1). https://www.researchgate.net/publication/240273279_Teacher_Quality_and_Student_Achievement_A_Review_of_State_Policy_Evidence
- 35 Partnership for the Future of Learning. (n.d.). Chapter 3: Effective retention strategies. *Teaching Profession Playbook*. <https://www.teachingplaybook.org/digital/chapter-3-retention>

For more information or to request a presentation on strategies for investing ARP funds to accelerate student learning and address student well-being, please contact Jason Willis, jwillis@wested.org, or Kelsey Krausen, kkrausen@wested.org.